

REMARKS/ARGUMENTS

This Amendment is submitted in response to the Office Action dated December 2, 2004. Claims 1-32 are pending. Claims 1, 2, 5, 18, 22, and 24 have been amended. Accordingly, claims 1-32 remain pending in the present application.

Allowable Subject Matter

The Examiner has indicated that claims 6, 7 and 26-28 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner also indicated that claims 9-21 were allowed.

Applicant appreciates and thanks the Examiner for such indications.

Amended Claims

Claims 1 and 22 were amended merely to move the phrase "from the portable image capture device to the server" to make more clear that the recited requested action and image identifier are transmitted "from the portable image capture device to the server." As such, the rationale underlying the grammatical amendment would bear no more than a tangential relation to any equivalent of the amended subject matter. Support for the amendment may be found in the claims as originally drafted, and throughout the specification, see for example, page 13, line 17 to page 14, line 1. Accordingly, no new matter has been presented. In addition, claims 2 and 24 were amended to recite "replacing each of the image files with its corresponding reduced size image file." Support for the amendment may be found throughout the specification, see for example, page 11, lines 1-9. Accordingly, no new matter has been presented.

Finally, claims 5 and 18 were amended to correct informal and typographical errors. Accordingly, no new matter has been presented.

35 U.S.C. §102 Rejections

The Examiner rejected claims 1-5, 8, 22-25, and 29-32 under 35 USC §102(e) as being anticipated by Safai et al (6,167,469). Applicant respectfully traverses the rejections.

The present invention provides a method and system for reducing storage and transmission bandwidth requirements of a portable, network-capable, image capture device, such as a wireless digital camera. According to the present invention, an image identifier is assigned to each image captured by the image capture device and uploaded from the image capture device to a server. Thereafter, when the device user wishes to perform an action on one of the previously uploaded images, the capture device merely transmits to the server the requested action and the image identifier corresponding to the image, rather than the image itself. Transmitting only the image identifier and the requested action to the server, as opposed to transmitting the actual image and requested action, reduces transmission bandwidth requirements needed to perform multiple operations on the image.

In a second aspect of the present invention, a method for reducing storage requirements in the image capture device is provided by reducing the size of each of the image files corresponding to the uploaded images. Reducing the size of the image file of each of the uploaded images after image uploading frees memory space for the capture of additional images and reduces storage requirements.

Safai is directed to a method and apparatus for transporting digital images from a digital camera to one or more external destinations via a server. The digital camera

executes a transport application that sends the selected images to the designated destinations over a data communication network. (Abstract; column 7, lines 31-37). The transport application enables the user to select or enter an email address, choose a photo, record a voice message, and then send the photo to a server. The server then emails the photo to the specified address. (Column 13, line 39 to column 14, line 15).

Claim 1

Applicant respectfully submits that Safai fails to teach or suggest the cooperation of elements recited in claim 1. In particular, Safai fails to teach or suggest “transmitting the requested action and the image identifier, rather than the image itself, *from the portable image capture device to the server,*” when the user wants to apply an action to an image that has been uploaded to the server. In the present invention, once the captured image has been uploaded to the server, an action pertaining to the uploaded image can be requested by using the image capture device to transmit the requested action and the image identifier assigned to the image to the server. In this manner, the image capture device is not required to transmit the actual image, which requires substantially higher levels of transmission bandwidth.

Safai is directed only to simplifying the process for distributing pictures stored in a digital camera to one or more parties. Safai does not attempt to reduce transmission bandwidth requirements between the image capture device and the server. Accordingly, nothing in Safai teaches or suggests “transmitting the requested action and the image identifier, rather than the image itself, from the portable image capture device to the server,” as recited in claim 1.

In the Office Action, the Examiner asserts that Safai teaches this feature at FIG. 2 and column 15, lines 27-45. Applicant respectfully disagrees. FIG. 2 is a block

diagram of the physical and logical components of the digital camera. Column 15, lines 27-45 discusses the virtual photo album service offered by the server. Here, the user can upload pictures from her camera to the server, and thereafter, retrieve selected pictures for viewing, printing, transport, etc. In the cited portion, Safai describes that the user can use the transport application or another application to connect to the server 601 and retrieve one or more photos and view the photos at the camera. (Col. 15, lines 36-40). But nothing in the cited portion teaches or suggests that the transport application transmits "*the image identifier*, rather than the image itself, from the portable image capture device to the server," as recited in claim 1.

In contrast to the subject matter defined by claim 1, Safai's transport application 230 (described in detail at col. 8, line 18 through col. 15, line 11) does not include an image identifier in any messages that are sent from the camera to Safai's server 601. Moreover, Safai's transport application always sends copies of the selected images to a destination or to the server 601. See, for example, col. 13, lines 10-12, stating "[w]hen the Send button 458 is selected, in response, the transport application *sends the selected photos to the destination address indicated in the confirmation box 456*" (emphasis added). Similarly, Safai describes at col. 13, lines 39-51, that "when the Send button 458 is pressed, the transport application causes the camera 100 to connect to the server 601.... The server 601 signals the transport application to send photos to it. *The transport application sends the selected photos to the server 601*" (emphasis added).

Although Safai describes at column 15, lines 36-40, that "another application" (other than the transport application) can be used to connect to the server 601 and retrieve one or more photos, Safai does not provide any description of the operation of

this “another application”, much less describe that the other application transmits “the image identifier, rather than the image itself, from the portable image capture device to the server,” as recited in claim 1.

Indeed, Safai’s suggestion that the transport application or “another application” is needed to connect to the server 601 and retrieve one or more photos illustrates another important distinction between Safai and the subject matter defined by claim 1. With Safai’s arrangement, client-side (or camera) applications (e.g., the transport application 230) are required to perform image-related functions using Safai’s server 601. In contrast, the subject matter defined by claim 1 requires only that an image capture device transmit a requested action and an image identifier to the server when the user wants to apply an action to an image that has already been uploaded to the server. Such an arrangement allows the complexity and cost of the image capture device to be reduced, and allows for image-related functions to be easily updated and added on a centralized server without having to add new applications to the image capture device itself.

Claim 22

Applicant respectfully submits that Safai fails to teach or suggest the cooperation of elements recited in claim 22. In particular, Safai fails to teach or suggest “assigning an image identifier to the uploaded images *by the server*,” “downloading the image identifiers to the image capture device for association with the corresponding uploaded image,” and “receiving a request from the portable image capture device to apply an action to one of the uploaded images, wherein the request only includes the image identifier of the image and the requested action.” In this version of the present invention, the server, and not the image capture device, *assigns* an identifier to each

uploaded image and *downloads* the identifier to the device. In addition, much like the subject matter defined by claim 1, the server recited in claim 22 receives the request that *only* includes the image identifier and requested action. That is, the request need not retransmit a copy of an image that has already been uploaded from the image capture device to the server and has been assigned an image identifier by the server.

In Safai, the server and its associated services communicate with the digital camera through the transport application. The server routes pictures from the transport application in the digital camera to the requested destinations, receives requests for services related to pictures transmitted from the transport application, and stores pictures in a virtual photo album. Nothing in Safai teaches or suggests that the server assigns “an image identifier to the uploaded images,” and then downloads “the image identifiers to the image capture device for association with the corresponding uploaded image,” as recited in claim 22. In addition, nothing in Safai teaches or suggests that the server receives requests from digital cameras that only include “the image identifier of the image and the requested action,” as recited in claim 22.

In the Office Action, the Examiner asserts that claim 22 is rejected on the same grounds as for claims 1-5 and 8. Nevertheless, Applicant respectfully submits that none of the cited claims, i.e., claims 1-5 and 8, recite “assigning an image identifier to the uploaded images *by the server*,” “downloading the image identifiers to the image capture device for association with the corresponding uploaded image,” and “receiving a request from the portable image capture device to apply an action to one of the uploaded images, wherein the request only includes the image identifier of the image and the requested action,” as recited in claim 22. Accordingly, Applicant respectfully submits that the rejections pertaining to claims 1-5 and 8 are inapplicable.

In view of the foregoing, Applicant respectfully submits that independent claims 1 and 22 are allowable over the cited references. Because the secondary references stand or fall with the primary references, claims 2-5, 8, 23-25, and 29-32 are allowable because they are dependent upon the allowable independent claims.

Dependent Claims 2-5, 8, 23-25, and 29-32

Applicants respectfully submit that the dependent claims are allowable for independent reasons in addition to those presented above. Safai simply fails to teach or suggest the present invention as recited in claims 2-5, 8, 23-25, and 29-32. The passages of Safai relied upon by the Examiner to reject the dependent claims, for the most part, fail to relate at all to the subject matter of the claims.

For example, in the rejection of claims 2 and 24, the Examiner cited column 10, lines 24-39 for teaching "reducing the size of each of the image files corresponding to the uploaded images" (col. 10, lines 33-40) and "replacing each of the image files with its corresponding reduced size image file" (col. 10, lines 25-39). Nevertheless, column 10, lines 24-39 states:

Generally, after entering one or more addresses, a user will next select one or more stored images, such as digital photos, to be sent to the one or more addresses. As shown in FIG. 5B, in block 522 a user selects the Choose Photo button 404 from menu 400. In response, in block 524 the transport application displays a photo select screen. FIG. 4C is a block diagram of a photo select screen 430 that is generated during the image selection step of the image transport application. The photo select screen 430 comprises a plurality of images 432a-432d, each of which is a small-size representation of a previously taken digital photo that is stored in the digital camera 100. Thus, the images 432a-432d comprise "thumbnail" views of photos that are stored in the camera. Although four (4) images 432a-432d are shown in FIG. 4C, this number is not critical, and any number of images can be shown in thumbnail form.

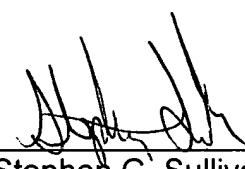
Nothing in this passage relates to *reducing* the size of an image file associated with a previously uploaded image or *replacing* the image file with the reduced image

file. Accordingly, Applicant respectfully submits that dependent claims 2 and 24 are allowable over Safai. As for claims 3-5, 8, 23, 25, and 29-32, Applicant respectfully submits that the cited portions of Safai fail to teach or suggest the present invention, as recited in those claims.

Conclusion

Based on the foregoing, Applicants respectfully submit that claims 1-5, 8, 22-25, and 29-32 are allowable over the cited references. Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,
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